

NOTES ON MARINE ALGAE OF WASHINGTON AND SOUTHERN BRITISH COLUMBIA

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Marine algae on the Pacific Coast of North America often show interesting distribution patterns because typically southern species are absent or rarely found in northern regions and northern species usually do not occur in southern waters. In recent years the number of species known only in southern or northern parts of the coast has become smaller, primarily through the records of Scagel (1957) and Dawson (1961). The following list of algae supplements the lists of Dawson and Scagel by recording species that have not previously been collected in Washington or southern British Columbia. In addition, further records for three rare genera, *Thuretellopsis*, *Porphyropsis*, and *Platysiphonia* are provided for this region. All specimens are in the herbarium of the University of Washington and are from the state of Washington unless otherwise indicated.

CHLOROPHYTA

Endophyton ramosum Gardner was collected in thalli of *Iridaea* sp. in drift on a beach 2 miles W of the Sekiu R., Straits of Juan de Fuca, Clallam Co., Oct. 25, 1964 (Norris 5074). This endophyte has not been collected previously north of southern Oregon.

PHAEOPHYTA

Punctaria chartacea Setchell & Gardner was collected by dredging in approximately 7 fathoms at Dot Rock, E of Decatur I., San Juan Co., June 18, 1964 (Norris 4618). It was also found intertidally at Whiffen Spit, Sooke, Vancouver I., British Columbia, July 10, 1964 (Norris 4747, West 133). This species was previously known only from Sitka, Alaska.

RHODOPHYTA

Porphyropsis coccinea (J. Ag.) Rosenv. was observed by Kylin growing on hydrozoa in the vicinity of Friday Harbor. As far as we can determine, *Porphyropsis* has not been recorded on the North American west coast since that time. We found the same species on hydrozoa and *Rhodymenia* dredged from 5-7 fathoms at Hein Bank, SW of San Juan I., June 13, 1964 (Norris 4696).

Thuretellopsis peggiana Kylin. Previously known only from the type collection, cystocarpic specimens of this species were dredged in 5-7 fathoms at Salmon and Hein Banks, SW of San Juan I., on June 13, 1964 (Norris 4584, West 76).

Gelidium sinicola Gardner was collected on the reef at Mukkaw Bay, Calallam Co., on Oct. 24, 1964 (Norris 5087). This species has not been reported north of central Oregon before this time.

Rhodophysema elegans (J. Ag.) Dixon was found commonly in dredged material at Hein Bank, SW of San Juan I., June 13, 1964 (Norris 4695); Salmon Bank, SW of San Juan I., July 16, 1964 (Norris 4792); Partridge Bank, W of Whidbey I., July 27, 1964 (Norris 5010). This species has not been previously recorded north of central California.

Rhodophysema georgii Batt. was collected intertidally several times on leaves of *Phyllospadix* and *Zostera* at Whiffen Spit, Sooke, Vancouver I., British Columbia, July 12, 1964 (Norris 4752); N of False Bay, San Juan I., July 24, 1964 (Norris 4842); Cattle Pt., San Juan I., Aug. 8, 1964 (Norris 4970). The only previous record of this species from the northeastern Pacific is a collection from Cape Arago, Oregon, reported by Gardner (Doty, 1947). Doty was unable to find Gardner's specimens and the species has not been collected since that time. It is possible that the specimens reported here are a stage in the life history of *Smithora naiadum*, but the structure of the thalli seems to be identical with specimens from Great Britain.

Dermatolithon pustulatum f. *ascripticum* (Foslie) DeToni was collected at Mukkaw Bay, Clallam Co., Oct. 24, 1964 (Norris 5082). It was growing on *Botryoglossum ruprechtianum*. This coralline has been recorded previously no farther north than central Oregon.

Rhodoglossum roseum (Kylin) G. M. Smith was collected intertidally at Deadman Bay, San Juan I., June 25, 1964 (Norris 4680) and N of False Bay, San Juan I., July 24, 1964 (Norris 4828). This species formerly was known only from central California and Baja California.

Gymnogongrus linearis (Turner) J. Ag. was collected at Glacier Pt. (Point No. Pt.), S. Vancouver I., British Columbia (Norris 5136, West 150), on July 11, 1964. Previous to this time, this species was known only as far north as central Oregon.

Besa papilliformis Setchell was collected by dredging in 5-7 fathoms at Partridge Bank, W of Whidbey I., July 27, 1964 (Norris 5018). This species has been collected only twice before, in San Francisco and on the Monterey Peninsula.

Callithamnion lejolisea Farlow was collected on *Calliarthron regenerans* at American Camp Beach, San Juan I., July 9, 1964 (Norris 4858, West 120). Formerly this epiphyte was reported only as far north as central Oregon.

Callithamnion endovagum Setchell & Gardner was collected by dredging at Partridge Bank, W of Whidbey I., July 27, 1964 (Norris 4925), growing in thalli of *Opuntiella*. Previously, this species was reported from Mexico and southern California.

Spermothamnion snyderae Farlow was collected by dredging in 5-7 fathoms at Salmon Bank, SW of San Juan I., June 13, 1964 (Norris 4586). It was also collected intertidally at Whiffen Spit, Sooke, Vancouver I., British Columbia, July 12, 1964 (Norris 4750), and at Mitchell Bay, San Juan I., July 7, 1964 (West 112). Collected specimens are sterile, but polysporangia are produced in culture.

Ceramium catonianum (Farlow) DeToni was collected intertidally at Whiffen Spit, Sooke, Vancouver I., British Columbia, July 12, 1964 (*Norris 4751, West 134*) and at Meadow Point (Golden Gardens) Seattle, Nov. 21, 1964 (*Norris 5130, West 220*). Formerly this species was recorded as far north as central Oregon.

Platysiphonia clevelandii (Farlow) Papenfuss, previously known in this region only from Whidbey I., was collected by dredging in 5-7 fathoms at Salmon Bank, SW of San Juan I., June 13, 1964 (*Norris 4599*); by dredging at Smith I., Island Co., July 27, 1964 (*Norris 4890*); and by dredging at Hein Bank, SW of San Juan I., July 6, 1964 (*Norris 5014*). This species was isolated in unialgal culture from 4599.

Membranoptera multiramosa Gardner was collected by dredging in 5-7 fathoms at Salmon Bank, SW of San Juan I., July 16, 1964 (*Norris 4788*). This species formerly was recorded as far north as the central Oregon coast.

Myriogramme hollenbergii Kylin has been found in both dredged material and in intertidal collections: Whiffen Spit, Sooke, Vancouver I., British Columbia, July 12, 1964, (*Norris 4754, West 140*); dredged in 5-7 fathoms, W of Smith I., Island Co., July 27, 1964 (*Norris 4891*); on intertidal rocks, N of False Bay, San Juan I., July 24, 1964 (*Norris 4839*); dredged at Partridge Bank, W of Whidbey I., July 27, 1964 (*Norris 4914*). Unialgal cultures were isolated from 4914. This species has not been reported north of Monterey, California.

Hymenena multiloba (J. Ag.) Kylin was collected at Mukkaw Bay, Clallam Co., Oct. 24, 1964 (*Norris 4103*). Previously this species was reported only as far north as central Oregon.

Cryptopleura lobulifera (J. Ag.) Kylin was collected intertidally at Deadman Bay, San Juan I., June 25, 1964 (*Norris 4631*). This species has not been recorded farther north than central California.

Polysiphonia brodiaei (Dillwyn) Greville was collected on a wood float at Lloyd's Boat House, Duwamish Head, West Seattle, Jan. 14, 1965 (*West 225, 226, 228*). The previous known Pacific range of this well known Atlantic species was from Santa Monica to San Francisco Bay, California.

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